



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/675,088  | 09/30/2003  | Jung-Seon Park       | CU-3336 VE          | 4762             |
| 26530   | 7590        | 04/25/2007           | EXAMINER            |                  |
| LADAS & PARRY LLP<br>224 SOUTH MICHIGAN AVENUE<br>SUITE 1600<br>CHICAGO, IL 60604 |             |                      | KARLS, SHAY LYNN    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1744                |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE  | MAIL DATE   |                      | DELIVERY MODE       |                  |
| 3 MONTHS  | 04/25/2007  |                      | PAPER               |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/675,088             | PARK ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Shay L. Karls          | 1744                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 April 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-13,15,16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-13,15,16 and 18-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 3-7, 10-13, 15-16, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downey et al. (USPN D493587) in view of Weaver et al. (USPN 5524321).**

Downey teaches a vacuum cleaning handle portion for drawing in air having dust and dirt. See attached figures for labeled elements. There is a main body including a body frame, a dust collector connected to the body frame and a drive motor (figure 1). There is a frame assembly including a frame body (figure 1) and a connecting portion (figure 1, 5 and 7) formed with a lower part of the frame body. The frame body further comprises a front casing facing

forward with respect to the vacuum cleaner and a rear casing coupled to the front casing (figure 5).

5). The frame body is shaped to correspond to an outer circumference of the main body (figure 1).

With regards to claim 3, the frame assembly further comprises a support (not visible in the figures because the main body is being supported on it, but it is the top surface of the connecting portion) for supporting the main body.

With regards to claim 4, the frame assembly further comprises a connecting guide for removable connecting accessories to the vacuum cleaner (figure 3).

With regards to claim 5, the frame body further comprises a wheel (figure 1) connected to the lower part of the frame assembly.

With regards to claim 6, the main body of the vacuum is connected to the dust collector (figure 1) and further comprises a dust receptacle (inside of dust collector) removably connected to the body frame for collecting dust and dirt. There is a button formed at an upper part of the body frame (figure 1).

With regards to claim 7, the frame assembly further comprises a frame handle (figure 1) disposed at an upper part thereof, and there is a handle groove (figure 1) disposed at a position corresponding to the button of the main body of the vacuum cleaner.

With regards to claim 10, the connecting portion comprises a communicating member (figure 7) formed at the main body of the vacuum.

With regards to claim 11, there is a power connector disposed on the lower part of the main body (figure 7).

Art Unit: 1744

With regards to claim 19, there is an on/off switch (figure 1) disposed at a front part of the main body.

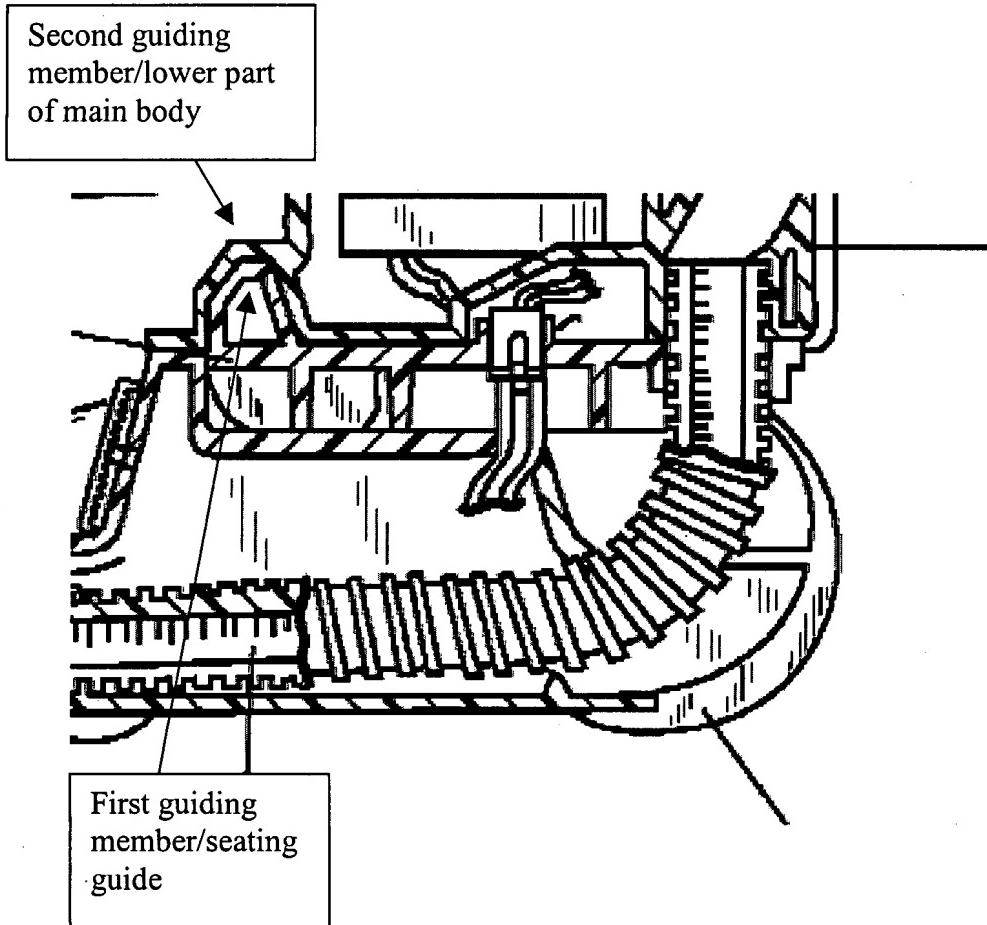
Downey teaches all the essential elements of the claimed invention however fail to teach a nozzle that the vacuum handle portion is pivotally attached to (claim 1). Weaver teaches a vacuum cleaner with a main body (14) connected to a frame assembly comprising a nozzle and frame body. The nozzle of Weaver comprises a communication hole (210; figure 4) through which the air drawn in through the nozzle assembly is directed to the main body of the vacuum (claim 10). Weaver also teaches a nozzle comprising a power port (216; figure 7) providing power from the main body (claim 11). The nozzle has a first guiding member on the connecting portion and a second guiding member corresponding to the first guiding member on the lower part of the main body (see figure below) (claim 12). The first guiding member is shaped in to a convex protrusion (cross section shows a convex shape in figure below) and the second guiding member is shaped in to a concave groove (cross section shows a concave groove in figure below) (claim 13). There is a seating guide on the connecting portion corresponding to the lower part of the main body of the vacuum cleaner (see figure below) (claim 15). The seating guide is shaped as a convex protrusion (cross section shows a convex shape in figure below) and the lower part of the main body is shaped as a concave groove (cross section shows a concave groove in figure below) (claim 16). Weaver also teaches a nozzle having a connecting portion which include a shaft member (230, 232) extending downward for pivotally connecting the shaft member with the nozzle (claim 18) The shaft is received in recesses (264, 266) for pivoting. Weaver's vacuum also comprises a first fixing portion (250) formed at the upper part of the nozzle (16) and a second fixing portion (lower surface of 200) formed at the lower part of the frame

Art Unit: 1744

assembly (18). The first fixing portion corresponds to the second fixing portion to provide a connection between the connecting portion and the frame assembly (claims 20 and 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pivoting nozzle assembly as taught by Weaver on the frame assembly as taught by Downey and modify the lower surface of the main body so that the communicating member and power connector of Downey match up with the communication hole and power port of Weaver, as well as modify the shape of the lower surface of the main body so the guide members fit together. Modifying the shape of elements are considered to be within the level of ordinary skill in the art. MPEP 2144. Since Downey is silent as to the type of nozzle used with the handle assembly, it would have been obvious to use any nozzle that is capable of operating with a detachable main body such as the one taught by Weaver.

Regarding claim 21, the fixing portions of Downey in view of Weaver are not convex or concave but are rectangular. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use convex or concave fixing portions because Applicant has not disclosed that convex or concave fixing portions provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the shape as taught by Downey in view of Weaver or the claimed convex/concave shape because both shapes perform the same function of providing a connection between the connecting portion and the frame assembly equally well.



**Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downey**

**in view of Weaver as applied to claim 1 above in view of Ohta et al. (USPN 6859975).**

Downey and Weaver teach all the essential elements of the claimed invention however fail to teach that the button is integrally formed with a connecting projection so that the connecting projection moves together with the button (claim 8). Also that there is a connecting recess that is slanted (claim 9) disposed in the frame body of the frame assembly shaped and

Art Unit: 1744

dimensioned to correspond to the connecting projection (claim 8). Ohta teaches a vacuum cleaner with a removable canister cover. The cover comprises a button (48) located at the top portion of the cover that is integrally formed with a connecting projection (vertical extension of 48b that engages 1a, see figures 3-4 and col. 7, lines 1-4) that moved together with the movement of the button. There is a connecting recess (1a, col. 7, lines 1-4) disposed in the frame body of the frame assembly shaped and dimensioned to correspond to the connecting projection. The connecting recess is slanted (1a, figure 3 shows a portion of 1a that is slanted at a downward angle). Ohta's handle (47a) comprises a handle recess that corresponds to the button operation of the main body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Downey's main body to include a quick release button corresponding to the handle groove, as taught by Ohta so that the main body can be released from the frame assembly with a one handed operation for quick use when cleaning tight spaces that are not feasible for the nozzle.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Shay L Karls*

Shay L Karls  
Patent Examiner  
Art Unit 1744

*Gladys J P Corcoran*  
GLADYS J P CORCORAN  
SUPERVISORY PATENT EXAMINER

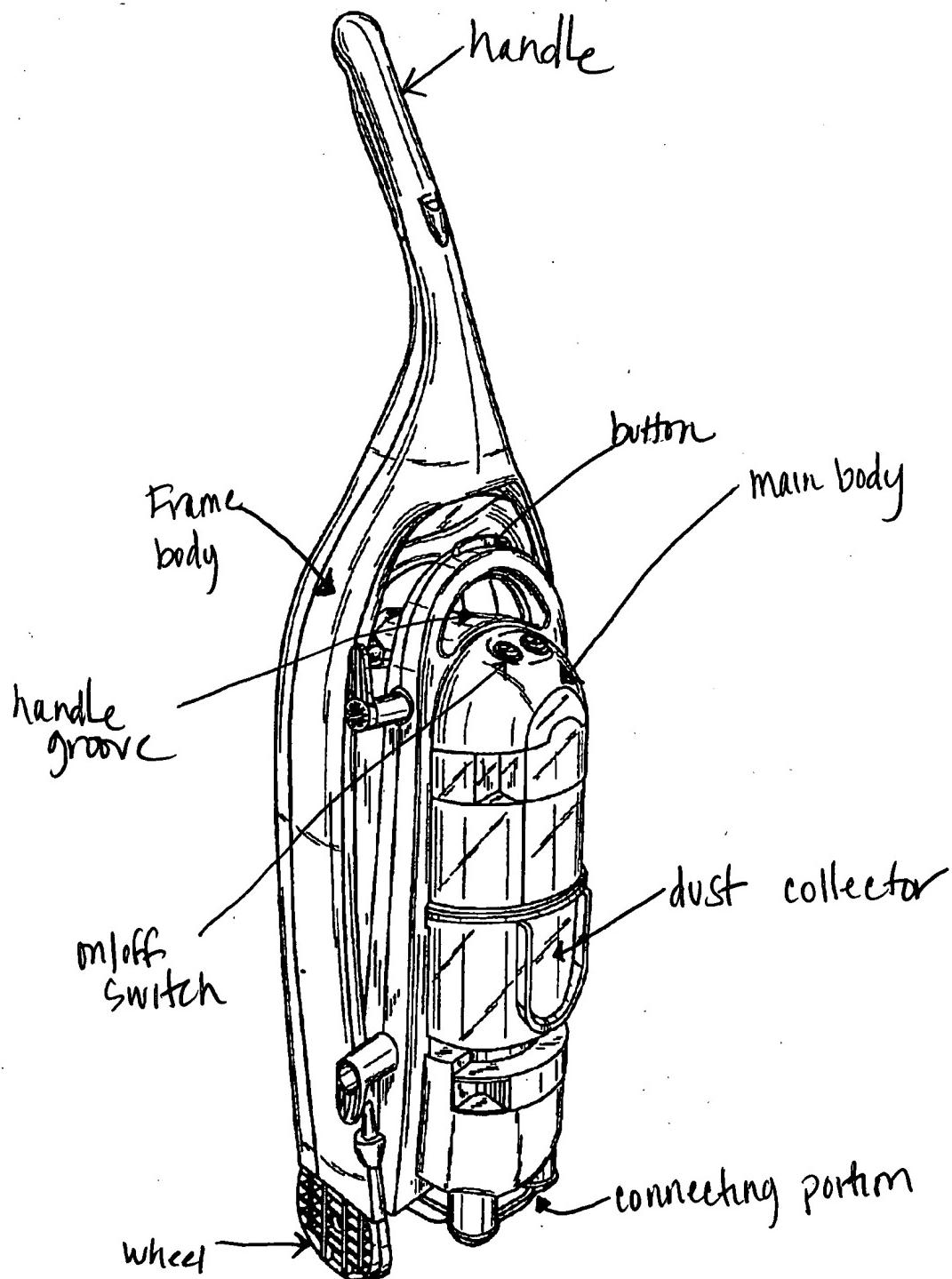
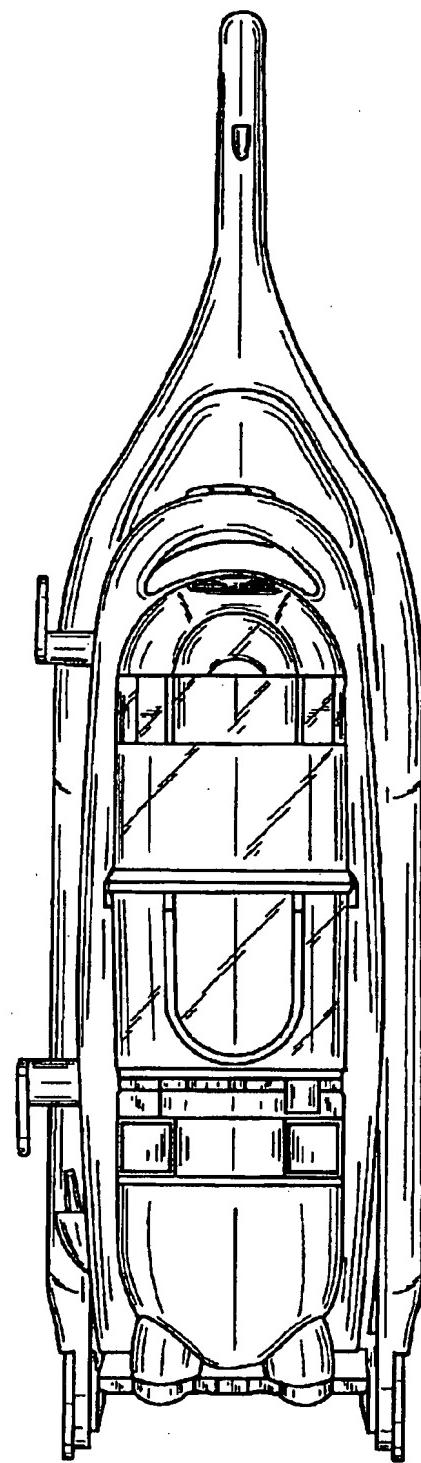
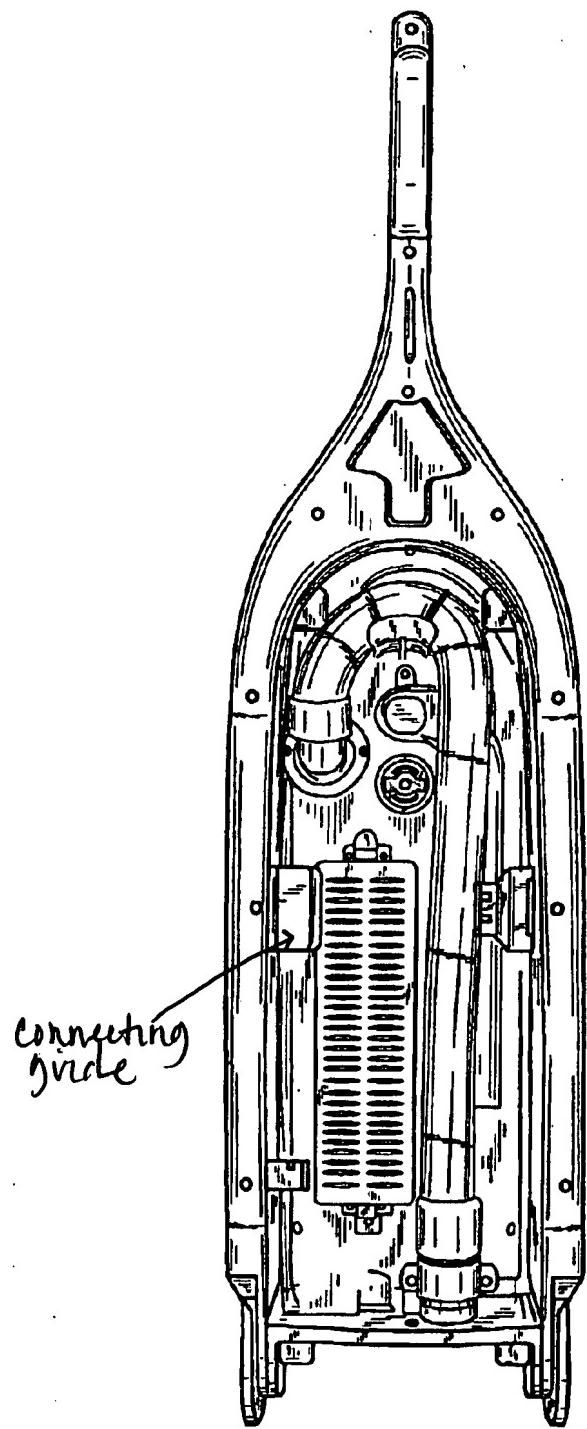


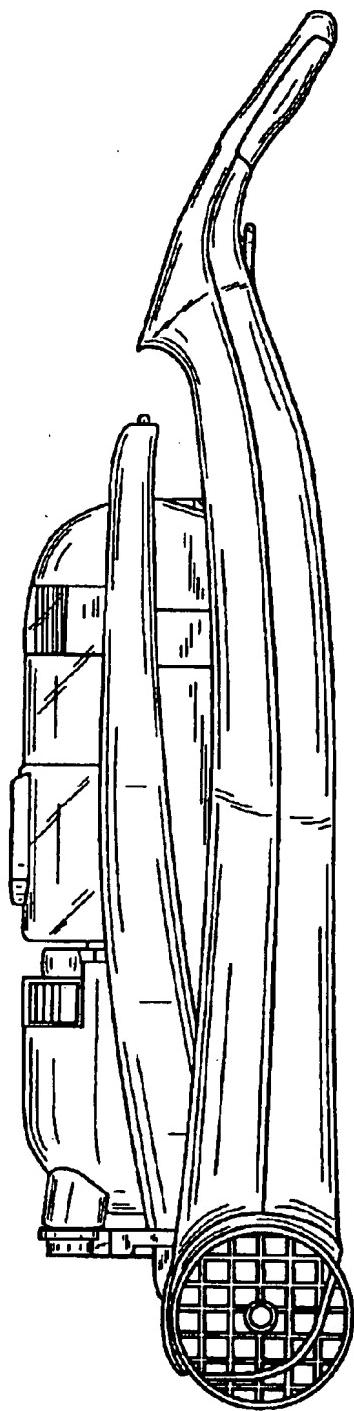
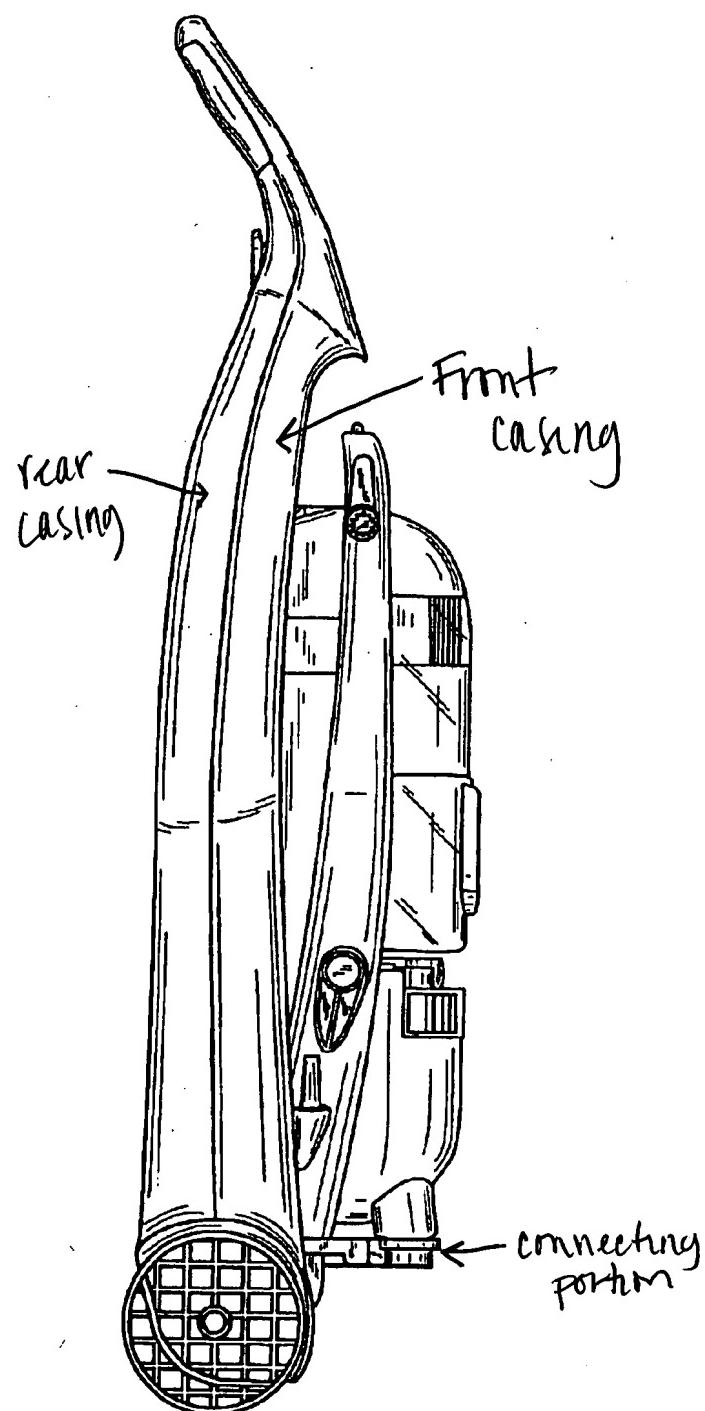
Fig. 1

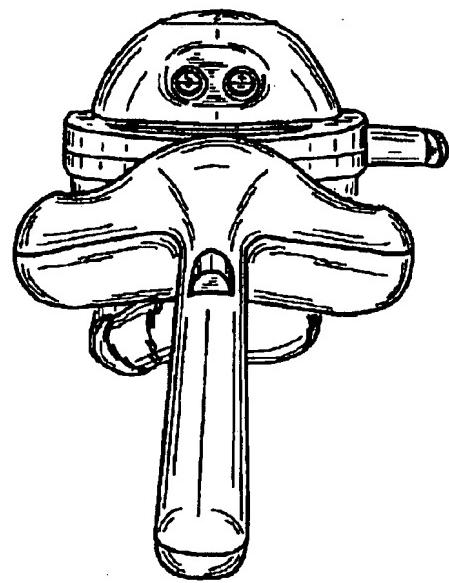


**Fig. 2**

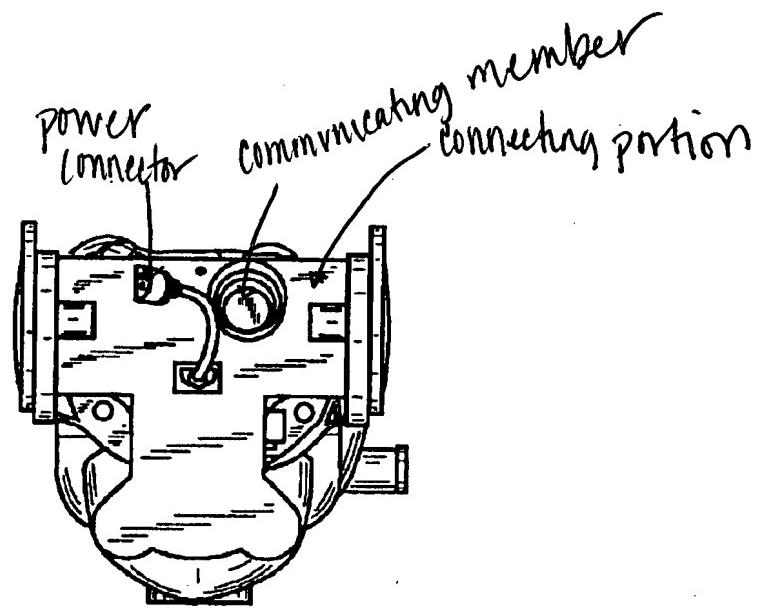


**Fig. 3**

**Fig. 4****Fig. 5**



**Fig. 6**



**Fig. 7**